



**UNION**  
COMMUNITY

## **Virdi Biometric Access and Time Control Technology The Competitive Advantage**

Union Community Co Ltd, a Korean based company established in 1999 is a market leader which develops, markets and distributes award winning Biometric and RFID products for Access Control, Time & Attendance, Door Locks, PC Security and produces product for the OEM market. Our products are sold in more than 70 countries under the Virdi brand.

Our client's and partners include internationally recognised organisations such as: **ADT Caps, Samsung , Assa Abloy (Mul-T-lock), Tyco(ADT), Honeywell, ADI, Chubb, DSC, Miwa, Aiphone, LG, Norbain** and many more.

Union Community holds the patent on the core technology, such as the fingerprint sensor, fingerprint algorithm, fingerprint search, live and fake finger detection. The capabilities of these patents have been independently verified and are internationally recognised. Union Community has had many prestigious awards bestowed on it, such as: Jang Young Sil Award, Korean World-class Product Award, Product Achievement Award – ISC West Security Industry Association, Korea Venture Design Award to name a few. Union Community is ISO accredited 9002.

Every day millions of people in over 40 industries transact on Virdi Access and Time Control devices. Organisations both large and small rely on Virdi technology to secure their facilities, record their employees attendance and control access to sensitive equipment and information.

To find out more about Virdi Biometric Technology, please visit our website :- [www.virditech.com](http://www.virditech.com)



## Some of the key features common to all the Virdi Biometric Products are:

### Live & Fake Finger detection:

A patented three tiered approach incorporating IR scanning technology with the ability to identify the material the fingerprint is made of (chemical composition) such as Silicon, Rubber, Paper, Plastic, Gel, etc. A Capacitive Sensor built into the Optical Scanner to measure electrical discharge and an intelligent algorithm to measure and compare image distortion.

### Automatic Finger Scan:

The Optical Scanner has a built in Capacitance Sensor to identify when a human finger is placed on the scanner and automatically start scanning the fingerprint. This has two advantages; it ensures that only live fingers are scanned and it assists with power saving, as the Optical Scanner does not need to be illuminated all the time.

### Patented Search Algorithm:

Incredibly fast and accurate template matching algorithm will complete a 1:1 match in less than .5 of a second, and a 1:N match for 1000 users in less than 1 second.

### Registration & Authentication levels set by User:

Each User can be enrolled and thereafter verified using custom registration and verification levels which have been individually configured to match the conditions of their fingers and the security needs of the organisation.

### Number of Enrolled fingers set by User:

Each User can load between 1 and 5 fingerprints on the biometric terminal. The database can accommodate the enrolment of up to 10 fingers and can be set to check that similar fingers do not exist in the database thereby eliminating “ghost employees”.

### Transaction Options Set by User:

Each User can have their transaction methods individually assigned. I.e. Finger only, Pin + Finger, Card or Finger, Card & Finger, Template on a Card, etc. There are over 10 combinations.

### Templates Stored in device memory and/or on the server:

When each User or Visitor is loaded on the biometric template management software, the operator can assign the User to be authenticated at all or only specific Virdi devices and can either download the User to the device for local authentication or store the template only in the application database for Server authentication, this helps to ensure that terminals do not get “clogged up” with out of date templates.

### Push Technology:

In order to minimize network traffic and provide a “real-time” update of transactions, the devices will “Push” their transactions to the Server as they occur. While templates are being sent to the Virdi devices, Users can continue to transact.

### Optical Sensor (Patented):

The Optical Sensor has a patent on the angle of the prism which gives the optimal level of distortion for image capture. This means that the biometric image scanned on a Virdi Optical Scanner has a higher image quality than competitive products; furthermore the surface of the sensor is hardened and coated which makes it resistant to wear and tear including use in harsh environments. This has been field proven in a multitude of installations in Africa where some of the harshest environments exist and where abuse of technology is rife.

### Interfaces:

The Virdi Biometric Terminals are intelligent and available with a multitude of communication and interface ports. As standard they have TCP/IP for Template and Data management, Wiegand 26 & 34bit IN & OUT ports to connect 3<sup>rd</sup> Party RFID Readers or Connect to Access Control Controllers, On Board Relays with NO/NC and Motorised Lock Control, Door Status Monitor, Alarm Panel I/F and RS323/485 Ports.

### Applications:

The Virdi Biometric Terminals can either operate as stand-alone or networked / Server managed devices and incorporate the functionality required for Time & Access Management, Canteen Control, alternatively they can simply emulate a card reader for interfaces to legacy systems.



## Product Specific Features



AC 6000

- 4.8" Colour Touch LCD
- 50 000 Users - 100 000 Templates - 500 000 Transactions
- Very fast Fingerprint Identification 10 000 templates > 2.5 seconds
- 1.3 Mega Pixel Camera – Record & Stores 12 000 Images
- Motion Sensor
- High Speed Processor
- Customizable Graphic Interface (on Screen Keypad)
- Intercom Door Station Emulation
- USB Interface for Configuration & Data Management
- 125KHz RFID or optional 13.65MHz Mifare Card Reader
- Optional Wireless TCP/IP Communication
- Optional Weatherproof Enclosure



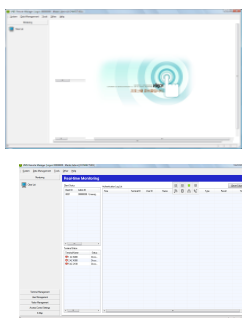
AC 4000

- Mono Backlit LCD
- 30 000 Users - 60 000 Templates - 250 000 Transactions
- Motion Sensor
- Keypad
- Intercom Door Station Emulation
- 125KHz RFID or optional 13.65MHz Mifare Card Reader
- Optional Weatherproof Enclosure



AC 2100 /  
AC 2500

- Mono Backlit LCD
- AC 2100 (100 Users - 200 Templates - 5 000 Transactions)
- AC 2500 (500 Users - 1000 Templates - 5 000 Transactions)
- IPX3 Rating - Weatherproof
- 125KHz RFID or optional 13.65MHz Mifare Card Reader
- Optional Robust Enclosure



UNIS – ACCESS  
MANAGER  
SOFTWARE

- Template & Device Management Software
- MS Access / MS SQL / Oracle Database
- Server & Remote Workstation Installation Options
- Multiple Users with Custom User Rights
- Real-Time Monitoring
- Template Management
- E-Map Functionality
- Remote Device Management
- Reporting
- SDK Available



V-Terminal  
SOFTWARE






- Turns a Windows Based PC & Virdi USB Biometric Reader into a Virtual Terminal.
- Local Template Management
- Replicates Functionality of AC4000 Biometric Terminal
- MS Access / MS SQL Database
- Networked or Standalone Operation



FOH02

- USB Communication
- Includes PC Security Software
- Option of 125KHz RFID or 13.65MHz Mifare Card Reader
- Option of V-Terminal Software – A Virdi Application which allows a PC to perform the function of Clocking Terminal.



|                                     |   |   |   |   |   |   |
|-------------------------------------|---|---|---|---|---|---|
|                                     |   |  |  |  |  |  |
| <b>Model</b>                        |   | <b>AC 6000</b>  | <b>V 4000</b>   | <b>V 3000</b>   | <b>AC 2100 / 2500</b>   | <b>AC 1000</b>  |
| <b>Type</b>                         |   | Biometric   | Biometric   | Biometric   | Biometric   | RFID  |
| <b>Live / Fake Finger Detection</b> |   | Yes   | Yes   | No  | Yes   | N/A   |
| <b>Memory</b>                       | <b>Users</b>                            | 50000   | 30000   | 3500  | 100 / 500   | 10000   |
|                                     | <b>Templates</b>                        | 100000  | 60000   | 7000  | 200 / 1000  | N/A   |
|                                     | <b>Transaction Log</b>                  | 500000  | 250000  | 12000   | 5000  | 20000   |
|                                     | <b>Photo Log</b>                        | 12500   | N/A   | N/A   | N/A   | N/A   |
| <b>Communication</b>                | <b>To Management Software</b>           | TCP/IP  | TCP/IP  | TCP/IP  | TCP/IP  | TCP/IP  |
|                                     | <b>Other</b>                            | USB   | No  | No  | No  | No  |
|                                     | <b>Optional:- Wireless</b>              | Yes   | No  | No  | No  | No  |
| <b>To 3rd Party Devices</b>         | <b>Wiegand</b>                          | Yes   | Yes   | Yes   | Yes   | Yes   |
|                                     | <b>RS 232</b>                           | Yes   | Yes   | Yes   | Yes   | No  |
|                                     | <b>RS 485</b>                           | Yes   | Yes   | Yes   | Yes   | Yes   |
| <b>From 3rd Party Devices</b>       | <b>Wiegand</b>                          | Yes   | Yes   | Yes   | Yes   | Yes   |
| <b>Display</b>                      |   | Colour TFT Touch LCD  | Mono Graphic LCD  | Mono Graphic LCD  | Mono Graphic LCD  | Mono Graphic LCD  |
|                                     | <b>Size</b>                             | 4.8" 800 x 480  | 128 x 64  | 122 x 32  | 128 x 64  | 128 x 64  |
|                                     | <b>Backlight</b>                        | Yes - With Motion Sensor  | Yes - With Motion Sensor  | Yes   | Yes   | Yes   |
|                                     | <b>Built-in Camera</b>                  | Yes   | No  | No  | No  | No  |
| <b>Card Reader</b>                  | <b>RFID, 125KHz - EM 4100</b>           | Yes   | Yes   | Yes   | Yes   | Yes   |
|                                     | <b>HID 26bit, 34bit</b>                 | Yes   | Yes   | No  | No  | No  |
|                                     | <b>Mifare</b>                           | Yes   | Yes   | Yes   | Yes   | Yes   |
|                                     | <b>Mifare Template Stored on a Card</b> | Yes   | Yes   | Yes   | Yes   | N/A   |
| <b>Key Pad</b>                      |   | Touch Screen  | Yes   | Yes   | No  | Yes   |
| <b>Motion Sensor</b>                |   | Yes   | Yes   | No  | No  | No  |
| <b>Auto Scan</b>                    |   | Yes   | Yes   | Yes   | Yes   | Yes   |
| <b>Door Phone Interface</b>         |   | Yes   | Yes   | Yes   | No  | No  |
| <b>Function Keys</b>                |   | Yes   | Yes   | Yes   | Yes   | Yes   |
| <b>Power Management</b>             |   | Yes   | Yes   | Partial   | Partial   | Partial   |
| <b>Sensor Type</b>                  |   | Optical   | Optical   | Optical   | Optical   | RFID  |
| <b>Sensing Area</b>                 |   | 13 x 15 mm  | 13 x 15 mm  | 13 x 15 mm  | 13 x 15 mm  | N/A   |
| <b>Resolution</b>                   |   | 500 dpi   | 500 dpi   | 500 dpi   | 500 dpi   | N/A   |
| <b>Verification</b>                 | <b>1:1</b>                              | <0.5 sec  | <0.5 sec  | <1 sec  | <1 sec  | N/A   |
| <b>Identification</b>               | <b>1:N</b>                              | <1 sec  | <1 sec  | <1 sec  | <1 sec  | N/A   |
| <b>Dimension</b>                    | <b>(W) x (H) x (D) in mm</b>            | 198 x 120 x 40  | 181 x 109 x 47  | 137 x 137 x 48  | 93 x 170 x 40   | 140 x 89 x 28   |
| <b>Applications</b>                 | <b>High Security</b>                    | Yes   | Yes   | No  | Yes   | No  |
|                                     | <b>Perimeter Access Control</b>         | Yes   | Yes   | No  | Yes   | Not Recommended   |
|                                     | <b>Internal Access Control</b>          | Yes   | Yes   | Yes   | Yes   | Yes   |
|                                     | <b>Time &amp; Attendance</b>            | Yes   | Yes   | Yes   | Yes   | Yes   |
|                                     | <b>Meal Management</b>                  | Yes   | Yes   | Yes   | No  | Yes   |